

**Draft**  
**WASTEWATER REUSE PERMIT**  
**LA-000217-01**  
**Silverwood Inc.**

Silverwood Inc., (Permittee) operating the Silverwood Theme Park  
LOCATED AT 27843 N. Highway 95, Athol, ID 83801-9900 and in  
NW1/4 of Section 33, Township 53 North, Range 3 West, Boise Meridian.  
IS HEREBY AUTHORIZED TO CONSTRUCT, INSTALL, AND OPERATE A  
WASTEWATER REUSE SYSTEM IN ACCORDANCE WITH THE  
WASTEWATER REUSE RULES (IDAPA 58.01.17) AND THE  
WASTEWATER RULES (IDAPA 58.01.16), THE GROUND WATER  
QUALITY RULE (IDAPA 58.01.11), AND ACCOMPANYING PERMIT,  
APPENDICES, AND REFERENCE DOCUMENTS.

THIS PERMIT IS EFFECTIVE FROM THE DATE OF SIGNATURE  
AND EXPIRES ON \_\_\_\_\_, 2013.

\_\_\_\_\_  
Dan Redline, Regional Administrator  
Idaho Department of Environmental Quality (DEQ)

Signed this \_\_\_\_\_ day of \_\_\_\_\_, 2008

**STATE OF IDAHO**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
2110 Ironwood Parkway,  
Coeur d'Alene, Idaho 83814  
(208) 769-1422  
(208) 769-1404 fax

LA-000217-01 Draft	Silverwood Inc.	April 14, 2008	Page 1
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## **B. Permit Contents, Appendices and Attachments**

	Page
A. Permit Certificate	1
B. Permit Contents, Appendices and Attachments	2
C. Abbreviations, Definitions	3-4
D. Facility Information	5-6
E. Compliance Schedule for Required Activities	7-9
F. Permit Limits and Conditions	10-13
G. Monitoring Requirements	14-16
H. Standard Reporting Requirements	17
I. Standard Permit Conditions: Procedures and Reporting	18-19
J. Standard Permit Conditions: Modifications, Violation, and Revocation	20

### Appendices

1. Environmental Monitoring Serial Numbers	21
2. Site Maps	22-23

### References

1. Plan of Operation (Operation and Maintenance Manual)
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The Sections, Appendices, and Reference Documents listed on this page are all elements of Wastewater Reuse Permit LA-000217-01 and are enforceable as such. This permit does not relieve Silverwood Inc. hereafter referred to as the permittee, from responsibility for compliance with other applicable federal, state or local laws, rules, standards or ordinances.

LA-000217-01 Draft	Silverwood Inc.	April 14, 2008	Page 2
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## C. Abbreviations, Definitions

Ac-in	Acre-inch. The volume of water or wastewater to cover 1 acre of land to a depth of 1 inch. Equal to 27,154 gallons.
BMP or BMPs	Best Management Practices
COD	Chemical Oxygen Demand
DEQ or the Department	Idaho Department of Environmental Quality
Director	Director of the Idaho Department of Environmental Quality, or the Directors Designee, i.e. Regional Administrator
ET	Evapotranspiration – Loss of water from the soil and vegetation by evaporation and by plant uptake (transpiration)
GS	Growing Season – Typically April 01 through October 31 (214 days) Silverwood Inc. LA-000217-01 Growing Season is April 01 through September 30 (183 days)
GW	Ground Water
GWQR	IDAPA 58.01.11 “Ground Water Quality Rule”
Guidance	Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater, DEQ.
HLRgs	Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to reuse hydraulic management units during the growing season. The HLRgs limit is specified in Section F. Permit Limits and Conditions.
HLRngs	Non-Growing Season Hydraulic Loading Rate. Includes any combination of wastewater and supplemental irrigation water applied to each hydraulic management unit during the non-growing season. The HLRngs limit is specified in Section F. Permit Limits and Conditions.
HMU	Hydraulic Management Unit (Serial Number designation is MU)
IWR	<p>Irrigation Water Requirement – Any combination of wastewater and supplemental irrigation water applied at rates commensurate to the moisture requirements of the crop, and calculated monthly during the growing season (GS). Calculation methodology for the IWR can be found at the following website: <a href="http://www.kimberly.uidaho.edu/water/appndxet/index.shtml">http://www.kimberly.uidaho.edu/water/appndxet/index.shtml</a>. The equation used to calculate the IWR at this website is:</p> $IWR = (CU - P_e) / E_i$ <p>CU is the monthly consumptive use for a given crop in a given climatic area. CU is synonymous with crop evapotranspiration</p> <p><math>P_e</math> is the effective precipitation. CU minus <math>P_e</math> is synonymous with the net irrigation requirement (IR)</p> <p><math>E_i</math> is the irrigation system efficiency. To obtain the gross irrigation water requirement (IWR), divide the IR by the irrigation system efficiency.</p>
IDAPA	Idaho Administrative Procedures Act.
LG	Lagoon
lb/ac-day	Pounds (of constituent) per acre per day
MG	Million Gallons (1 MG = 36.827 acre-inches)
MGA	Million Gallons Annually (per WLAP Reporting Year)
NGS	Non-Growing Season – Typically November 01 through March 31 (151 days)
NVDS	Non-Volatile Dissolved Solids (= Total Dissolved Solids less Volatile Dissolved Solids)
O&M manual	Operation and Maintenance Manual, also referred to as the Plan of Operation

Reuse	The use of reclaimed wastewater for beneficial uses including, but not limited to, land treatment, irrigation, aquifer recharge, use in surface water features, toilet flushing in commercial buildings, dust control, and other uses.
Reuse Reporting Year	The reporting year begins with the non-growing season and extends through the growing season of the following year, typically November 01 – October 31. For example, the 2000 Reporting Year was November 01, 1999 through October 31, 2000.
SAR	Sodium Absorption Ratio
SI	Supplemental Irrigation water applied to the reuse treatment site.
Soil AWC	Soil Available Water Holding Capacity - the water storage capability of a soil to a depth at which plant roots will utilize (typically 60 inches or root limiting layer)
SMU	Soil Monitoring Unit (Serial Number designation is SU)
SW	Surface Water
TDS	Total Dissolved Solids or Total Filterable Residue
TDIS	Total Dissolved Inorganic Solids – The summation of chemical concentration results in mg/L for the following common ions: calcium, magnesium, potassium, sodium, chloride, sulfate, and 0.6 times alkalinity (alkalinity expressed as calcium carbonate). Nitrate, Silica and fluoride shall be included if present in significant quantities (i.e. > 5 mg/L each).
TMDL	Total Maximum Daily Load – The sum of the individual waste-load allocations (WLA's) for point sources, Load Allocations (LA's) for non-point sources, and natural background. Such load shall be established at a level necessary to implement the applicable water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. IDAPA 58.01.02 <i>Water Quality Standards and Wastewater Treatment Requirements</i>
Typical Crop Uptake	Typical Crop Uptake is defined as the median constituent crop uptake from the three (3) most recent years the crop has been grown. Typical Crop Uptake is determined for each hydraulic management unit. For new crops having less than three years of on-site crop uptake data, regional crop yield data and typical nutrient content values, or other values approved by DEQ may be used.
USGS	United States Geological Survey
WW	Wastewater applied to the reuse treatment site

## D. Facility Information

<b>Legal Name of Permittee</b>	Silverwood Inc.
<b>Type of Wastewater</b>	Sewage and industrial wastewater from water filtration backwash
<b>Method of Treatment</b>	Gravity collection of whole sewage from the Silverwood Theme Park discharges into three completely mixed aerated lagoons and one final settling lagoon. Further treatment is achieved by coagulation with polymer and filtration using a moving bed up-flow sand filter. Disinfection with chlorine and 30-minutes of contact are done prior to slow rate irrigation of the wastewater onto a specific landscaped area at Silverwood Theme Park or onto a grass/nursery site near the treatment site.
<b>Type of Facility</b>	Wastewater from a recreational theme park consisting of sanitary wastewater and backwash wastewater from water filters serving water slide amenities. Two-thirds of the wastewater is sanitary sewage and one-third of the wastewater is from backwash of filters associated with the water slide park.
<b>Site Acres</b>	Primary Area (grass/nursery site) – approximately 10 acres Boulder Beach – approximately 8 acres See map in Appendix 2
<b>Facility Location</b>	Kootenai County, Idaho 16 miles north of Coeur d'Alene on Highway 95.
<b>Legal Location</b>	The 95-acre treatment site including the Primary Area is in the NW1/4 of Section 33, Township 53 North, Range 3 West, Boise Meridian. The 380-acre theme park including Boulder Beach site is located immediately north of the treatment site in the E1/2 of Section 28, T53N, R3W.
<b>County</b>	Kootenai
<b>USGS Quad</b>	Athol

<b>Soils on Site</b>	Soils are described as Avonville and Bonner gravelly silt loams typical for soils encountered over the Spokane Valley-Rathdrum Prairie Aquifer.
<b>Depth to Ground Water</b>	Approximately 300 feet.
<b>Beneficial Uses of Ground Water</b>	Domestic, industrial, and agricultural
<b>Nearest Surface Water</b>	Pend Oreille Lake – approximately 8 miles
<b>Beneficial Uses of Surface Water</b>	Agricultural, recreation, aquatic habitat
<b>Facility Contact Persons Mailing Address Phone/Fax Number</b>	<p><b>Responsible Official/Owner:</b>  Lane Hubbard, General Manager  Silverwood Inc.  27843 N. Highway 95  Athol, ID 83801-9900  208-683-3400</p> <p><b>Design Engineer:</b>  James Coleman, P.E.  Coleman Engineering  E. 1677 Miles Avenue, Suite 200  Hayden Lake, ID 83835  (208) 762-4704  (208) 762-4620 (fax)</p> <p><b>Operations:</b>  Tom Daugherty, President  Blue Water Technologies, Inc.  10450 Airport Drive  Hayden, ID 83835  (208)209-0391  (208) 209-0396 (fax)</p>

## E. Compliance Schedule For Required Activities

The Activities in the following table shall be completed on or before the Completion Date unless modified by the DEQ in writing.

Compliance Activity Number  Completion Date	Compliance Activity Description
<p>CA-217-01 Plan of Operation</p> <p>July 1, 2008</p>	<p>A Plan of Operation (Operation and Maintenance Manual or O&amp;M Manual) for the wastewater treatment and reuse facilities, incorporating the requirements of this permit, shall be submitted to DEQ for review and approval. The Plan of Operation shall be designed for use as an operator guide for actual day-to-day operations to meet permit requirements and ensure proper operation of the wastewater treatment and reuse facility.</p> <p>Refer to Appendix A.12 of the Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater for a Plan of Operation checklist, and address all relevant items in the checklist.</p> <p>At a minimum, the Plan of Operation shall specifically address the following items:</p> <ul style="list-style-type: none"> <li>• All sampling, monitoring and reporting requirements of this permit.</li> <li>• A Ground Water Sampling and Monitoring Plan, that shall address the description of approved sample collection methods, appropriate analytical methods, and the companion quality assurance/control (QA/QC) protocols.</li> <li>• Operating procedures for periods of shutdown.</li> <li>• Odor Management Plan - Specific design considerations, operation and maintenance procedures, and management practices to be employed to minimize the potential for and limit odors. The Plan shall also include procedures to respond to an odor incident if one occurs, including notification procedures.</li> <li>• Waste Solids Management Plan - The plan shall describe how waste solids generated at the facility will be handled and disposed of to meet the requirements of Section I, No. 5 of this permit.</li> <li>• Runoff Management Plan – The Plan shall describe control structures and other Best Management Practices (BMPs) (e.g. collection basins, berms, etc.) designed to prevent runoff from any site or fields used for wastewater reuse to property not owned by Silverwood Inc. except in the event of a 25-year, 24-hour storm event or greater, using Western Regional Climate Center (WRCC) Precipitation Frequency Map, Figure 28 'Isopluvials of 25-YR, 24-HR Precipitation'.</li> </ul>
<p>CA-217-02</p> <p>July 1, 2008</p>	<p>Ownership: Provide copy of the recorded deed for the title transfer to Silverwood Inc. of the 95-acre wastewater treatment site described as Kootenai County parcel number 53N03W-33-0750.</p>

Compliance Activity Number Completion Date	Compliance Activity Description
CA-217-03 September 1, 2008	Ground Water Monitoring Well Network Plan: Submit to DEQ for review and approval plans and specifications for monitoring well networks at the two reuse sites. The plan needs to include information from test well drilling in 2007 and a model reflecting the ground water aquifer contours in the vicinity of the two land application sites.
CA-217-04 June 1, 2008	Coagulation, Filtration, and Disinfection Equipment: Submit to DEQ for review and approval plans and specifications prepared by a professional engineer detailing the proposed polymer feed and mixing chamber, disinfection feed pump and chlorine solution tank, continuous turbidimeter and recording equipment, chlorine residual analyzer, effluent pump specifications and details, irrigation pump specifications and details, system controls and all other equipment or piping needed in the filter building. This information is required in addition to the information provided with the plans and specifications dated October 12, 2007.
CA-217-05 May 1, 2008	Pilot Testing Plan: Prior to system startup and no later than May 1, 2008, Blue Water Technologies, Inc. shall submit to DEQ for review and approval a pilot testing plan, prepared by a professional engineer, for the Class B treatment system. The plan needs to detail routine monitoring efforts, performance testing, and frequencies to establish the ability of the installed treatment system to consistently achieve Class B wastewater reuse standards.
CA-217-06 October 1, 2009	Pilot Test Summary Report: Submit to DEQ for review a Pilot Test Summary Report prepared by a professional engineer documenting treatment operation and performance of the Class B treatment system. If Class B effluent can not be achieved on a continuous/consistent basis after the second operating season of irrigation (ending on September 30, 2009), then additional pilot testing shall be performed until performance is fully demonstrated. During the pilot testing period, the effluent irrigation will be restricted to the Primary Area, if it meets the Class C effluent criteria.
CA-217-07 May 1, 2008	Boulder Beach Wastewater Reuse System: Prior to system startup and no later than May 1, 2008, submit to DEQ for review and approval plans and specifications prepared by a professional engineer for construction of the Class B wastewater irrigation system to be installed at the Boulder Beach area.



Compliance Activity Number Completion Date	Compliance Activity Description
CA-217-08 May 1, 2008	Primary Area Cropping Plan: Submit to DEQ for review and approval a detailed cropping plan for establishing plants and vegetation in the primary irrigation area prior to wastewater reuse application and no later than May 1, 2008.
CA-217-09 May 1, 2008	Notice of Abandonment: Provide to DEQ and Panhandle Health District notification that all of the septic tanks and drainfields have been properly abandoned as required by the Individual and Subsurface Sewage Disposal Rules (IDAPA 58. 01.03).
CA-217-10 May 1, 2008 and yearly included with the annual report hereafter	Operator Licensure: Silverwood Inc. must place the operation of their wastewater system, under the responsible supervision of an operator who holds a valid license equal to or greater than the classification of the wastewater treatment plant and collection system. Submit copies of the operator licenses for the primary and backup system operators consistent with the established licensure needs of the system per Idaho Wastewater Rules (IDAPA 58.01.16.203)  Verification of operator licensure shall be submitted with each Annual Wastewater Reuse Site Performance Report, required in Section H of this permit.
CA-217-11 30 days after construction completion	Submit to DEQ for review and approval the record drawings for the wastewater collection, treatment, and reuse system serving the Silverwood Theme Park within 30 days of completion of construction.
CA-217-12 180 days prior to permit expiration	Submit an application to DEQ for permit renewal.

## F. Permit Limits and Conditions

The Permittee is allowed to discharge wastewater onto designated applications areas as prescribed in the table below and in accordance with all other applicable permit conditions and schedules.

Category	Permitted Limits and Conditions	
Type of Wastewater	Class B effluent	Class C effluent
Treatment	Oxidized, coagulated, clarified, filtered, (or treated to an equivalent process) and disinfected.	Oxidized and disinfected
Application Site Areas and timing	<p>Primary Area - approximately 10 acres within the nursery/grass field near the treatment lagoons</p> <p>Boulder Beach - approximately 8 acres of designated landscaped areas at the theme park.</p> <p>See map in Appendix 2.</p> <p>Effluent may be irrigated each year between May 1 and September 30<sup>th</sup> or as otherwise allowed in writing by DEQ prior to reuse. Boulder Beach area may be irrigated only during periods of non-use by public.</p>	<p>Primary Area – approximately 10 acres within the nursery/grass field near the treatment lagoons</p> <p>See map in Appendix 2.</p> <p>Effluent may be irrigated each year between May 1 and September 30<sup>th</sup> or as otherwise allowed in writing by DEQ prior to reuse.</p>
Allowable crops	<p>Primary Area: Nursery plants and grass harvested as a hay crop.</p> <p>Boulder Beach: Existing park vegetation consisting of lawns, shrubs, and trees.</p>	Primary Area: Nursery plants and grass harvested as a hay crop.
Turbidity	<p>The daily arithmetic mean of all daily measurements of turbidity shall not exceed two (2) NTU, and turbidity shall not exceed five (5) NTU at any time. Turbidity shall be measured continuously. The turbidity standard shall be met prior to disinfection.</p> <p>When continuous turbidity monitoring falls for more than five minutes below the turbidity standards, filtered</p>	No requirement.

Category	Permitted Limits and Conditions	
	wastewater shall be automatically diverted to the Primary Area until such time as the effluent meets the turbidity standard.	
<b>Disinfection</b>	<p>At the point of compliance, the median number of total coliform organisms shall not exceed two and two-tenths (2.2) per one hundred (100) milliliters, and does not exceed twenty-three (23) per one hundred (100) milliliters in any confirmed sample, as determined from the bacteriological results of the last seven (7) days for which analyses have been completed. Analysis shall be based on daily sampling during periods of application. The point of compliance for total coliform shall be at any point in the system following final treatment and disinfection contact time.</p> <p>See Appendix 1 for sampling points description.</p>	<p>At the point of compliance, the median number of total coliform organisms shall not exceed twenty-three (23) per one hundred (100) milliliters, and does not exceed two hundred thirty (230) per one hundred (100) milliliters in any confirmed sample, as determined from the bacteriological results of the last five (5) days for which analyses have been completed. Analysis shall be based on daily sampling during periods of application. The point of compliance for total coliform shall be at any point in the system following final treatment and disinfection contact time.</p> <p>See Appendix 1 for sampling points description.</p>
<b>Residual Chlorine</b>	<p>Residual chlorine at the point of compliance shall be not less than one (1) mg/L free chlorine after a contact time of thirty (30) minutes at peak flow.</p> <p>See Appendix 1 for sampling points description.</p>	No requirement.
<b>Buffer Zones</b>	<p>All buffer zones must comply with, at minimum, local zoning ordinances. Other minimum buffer zones are as follows:</p> <ul style="list-style-type: none"> <li>• 100 ft from reuse site and inhabited dwellings</li> <li>• 0 ft from reuse site and areas accessible by the public</li> <li>• 100 ft from reuse site and permanent and intermittent surface water</li> <li>• 50 feet from reuse site and irrigation ditches and canals</li> <li>• 500 feet from reuse site and private water supply wells<sup>1</sup></li> <li>• 1000 feet from reuse site and public</li> </ul>	<p>All buffer zones must comply with, at minimum, local zoning ordinances. Other minimum buffer zones are as follows:</p> <ul style="list-style-type: none"> <li>• 300 ft from reuse site and inhabited dwellings</li> <li>• 50 ft from reuse site and areas accessible by the public</li> <li>• 100 ft from reuse site and permanent and intermittent surface water</li> <li>• 50 feet from reuse site and irrigation ditches and canals</li> <li>• 500 feet from reuse site and private water supply wells<sup>1</sup></li> <li>• 1000 feet from reuse site and public</li> </ul>

Category	Permitted Limits and Conditions	
	<p>water supply wells<sup>1</sup></p> <ul style="list-style-type: none"> <li>Berms and other BMPs shall be used to protect the well head of on-site wells.</li> </ul>	<p>water supply wells<sup>1</sup></p> <ul style="list-style-type: none"> <li>Berms and other BMPs shall be used to protect the well head of on-site wells.</li> </ul>
	1) Any mitigation measures to reduce buffer zone distances shall be submitted to and approved by DEQ prior to use.	
<b>Fencing and Posting</b>	<p>Primary Area: This site shall be fenced and warning signs posted every 500 feet along the perimeter and at each corner indicating "Warning: Irrigated With Reclaimed Wastewater –Do not Drink"</p> <p>Boulder Beach: Irrigation piping shall be installed using purple (pantone 512) wastewater reuse piping. At all irrigation outlets warning signs and labels indicating "Warning: Irrigated With Reclaimed Wastewater –Do not Drink" shall be posted.</p> <p>All exposed and above ground piping, risers, fittings, pumps, valves, etc. used for reuse water shall be painted purple, Pantone 512 and piping shall be identified using an accepted means of labeling reading "Warning: Reclaimed Water – Do Not Drink".</p>	<p>Primary Area: This site shall be fenced and warning signs posted every 500 feet along the perimeter and at each corner indicating "Warning: Irrigated With Reclaimed Wastewater –Do not Drink"</p> <p>All exposed and above ground piping, risers, fittings, pumps, valves, etc. used for reuse water shall be painted purple, Pantone 512 and piping shall be identified using an accepted means of labeling reading "Warning: Reclaimed Water – Do Not Drink".</p>
<b>Maximum Hydraulic Loading Rate, Growing Season (includes wastewater and supplemental irrigation water)</b>	<p>Growing Season (GS) Hydraulic Loading Rate should generally follow the Irrigation Water Requirement (IWR) using data from the tables of the following University Of Idaho web site: <a href="http://www.kimberly.uidaho.edu/water/appndxet/index.shtml">http://www.kimberly.uidaho.edu/water/appndxet/index.shtml</a>. IWR is equal to the Mean IR data from these tables divided by the irrigation system efficiency.</p> <p>In lieu of these tables, current climatic and evaporation data, or 30-year average data may be used to calculate the IWR, as defined on page 3 of this permit. Assume no carryover soil moisture and a leaching rate of zero in calculating the IWR. Application shall generally follow consumptive use rates for the crop throughout the season.</p> <p>Annual application shall not exceed 22-inches applied at a weekly rate of no more than 1.5 inches minus precipitation.</p>	
<b>Runoff</b>	<p>Upon approval by DEQ of the Runoff Management Plan included in the O&amp;M Manual (CA-000217-01), Silverwood Inc. shall implement the plan, and shall construct, operate, and maintain the control structures and other BMPs in accordance with the plan.</p>	

Category	Permitted Limits and Conditions
<b>Groundwater Protection</b>	Ground Water Quality shall be maintained in compliance with Idaho <i>Ground Water Quality Rule</i> IDAPA 58.01.11.
<b>Grazing</b>	Grazing is not allowed.
<b>Supplemental Irrigation Water Protection</b>	For systems with wastewater and fresh irrigation water interconnections, DEQ approved backflow prevention devices are required.
<b>Odor Management</b>	The wastewater treatment plant, reuse facilities, and other operations associated with the facility shall not create a public health hazard or nuisance conditions, including odors. Odors shall be managed in accordance with the DEQ approved Odor Management Plan included in the Operating and Maintenance Manual (See Compliance Activity CA-00217-01).
<b>Wastewater Treatment Facility and Reuse Operator</b>	The wastewater treatment facility shall be operated by personnel certified and licensed in the State of Idaho wastewater operator training program at the operator class level specified in IDAPA 58.01.16.203 of the <i>Wastewater Rules</i> , and properly trained to operate and maintain the system. Operation of the wastewater treatment system shall be monitored on a 24-hour basis for alarm conditions, including notification of the qualified operating personnel under alarm conditions.

## G. Monitoring Requirements

- 1) Appropriate analytical methods, as given in the *Guidance for Reclamation and Reuse of Municipal and Industrial Wastewater* or as approved by the Idaho Department of Environmental Quality (hereinafter referred to as DEQ), shall be employed. A description of approved sample collection methods, appropriate analytical methods and companion QA/QC protocol shall be included in the Operation and Maintenance Manual.
- 2) The permittee shall monitor and measure parameters and submit information as stated in the Facility Monitoring Table in this section.
- 3) Samples shall be collected at times and locations that represent typical environmental and process parameters being monitored.
- 4) Monitoring locations are described in Appendix 1. Environmental Monitoring Serial Numbers.
- 5) Monitoring is required at the frequency shown in the table below if wastewater is applied anytime during the time period shown. Unless otherwise agreed in writing by the DEQ, data collected and submitted shall include, but not be limited to, the parameters and frequencies in the Facility Monitoring Table as follows.
- 6) Ground Water Monitoring Procedure (to be used prior to the Ground Water Well Sampling and Monitoring Plan is completed): Ground Water Monitoring Wells shall be purged a minimum of three casing volumes and/or until field measurements for pH, specific conductance and temperature meet the following conditions: two successive temperature values measured at least five minutes apart are within one degree Celsius of each other, pH values for two successive measurements measured at least five minutes apart are within 0.2 units of each other, and two successive specific conductance values measured at least five minutes apart are within 10% of each other. This procedure will determine when the wells are suitable for sampling for constituents required by the permit. Other procedures, such as low flow sampling, may be considered by DEQ for approval. The static water level shall be measured prior to pumping or sampling for ground water.
- 7) Annual reporting of monitoring requirements is described in Section H, Standard Reporting Requirements.

Facility Monitoring Table

Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
Daily during operation season (May1-Sept30) Weekly during other times.	Lagoon Inlet Flow Monitoring	Trapezoidal Flume with Ultrasonic Level Sensor. Signal Recorded by Local Control Panel in Filter Building.	Record Total Gallons per day during park operations. Record Total Gallons per week during other times. Report Total Monthly and Total Annually Gallons.
Daily whenever irrigating.	Effluent Flow Meter	McCrometer 2.5" Propeller-Type In-line Flow Meter with signal to Local Control Panel in Filter Building	Record Total Gallons per day to each management unit. Report Total Monthly and Total Annually Gallons to each management unit.
Daily whenever irrigating.	Effluent from upflow sand filters & before disinfection. Point of Compliance: WW-0217-01	Continuous Recording Turbidimeter	Daily arithmetic mean and maximum recorded instantaneous value in Nephelometric Turbidity Units (NTU)
Daily whenever irrigating.	Effluent after the 24" Chlorine Contact Pipeline. Point of Compliance: WW-0217-02	Total Coliform Bacteria	organisms/100 ml
Daily whenever irrigating.	Effluent after the 24" Chlorine Contact Pipeline. Point of Compliance: WW-0217-02	Continuous Recording Free Chlorine Residual	mg/l
Weekly whenever irrigating	Any location following treatment Point of Compliance: WW-0217-01 or WW-0217-02	Weekly composite sampling for total nitrogen, Nitrate Nitrogen, Biological Oxygen Demand (BOD5), and total Phosphorus.	mg/l
Daily whenever irrigating.	Flow Meter on supplemental irrigation water.	Supplemental irrigation water from the Silverwood drinking water system used to supply Boulder Beach irrigation system And Supplemental Irrigation water used at the Primary Area	Record Gallons per day. Report Monthly Total and Annually Total
Quarterly	Ground Water Monitoring Wells* * Ground Water Monitoring Wells to be identified in the Ground Water Monitoring Well Network Plan per Compliance Item CA-	Total Dissolved Solids, Nitrate Nitrogen and Total Coliform bacteria.	mg/l and organisms/100 ml.

Frequency	Monitoring Point	Description and Type of Monitoring	Parameters
	00217-03		
Annually	All flow measurement locations.	Flow measurement calibration of all flows.	Document the flow measurement calibration of all flow meters and pumps used directly or indirectly measure all wastewater, tail water, flushing water, and supplemental irrigation water flows applied to each HMU.
Annually	All supplemental irrigation pumps directly connected to the wastewater distribution system.	Backflow testing	Document the testing of all backflow prevention devices for all supplemental irrigation pumps directly connected to the wastewater distribution system(s). Report the testing date(s) and results of the test (pass or fail). If any test failed, report the date of repair or replacement of backflow prevention device, and if the repaired/replaced device is operating correctly.



## H. Standard Reporting Requirements

1. The permittee shall submit an Annual Wastewater Reuse Site Performance Report ("Annual Report") prepared by a competent environmental professional no later than January 31 of each year which shall cover the previous year (see section F for reuse reporting period). The Annual Report shall include results for monitoring required in Section G, status of compliance activities, and an interpretive discussion of monitoring data (ground water, vadose zone, hydraulic loading, wastewater etc.) with particular respect to environmental impacts by the facility.
2. The annual report shall contain the results of the required monitoring as described in Section G. Monitoring Requirements. If the permittee monitors any parameter more frequently than required by this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the annual report.
3. The annual report shall be submitted to the Engineering Manager in the applicable Regional DEQ Office.

Coeur d'Alene Regional Office  
2110 Ironwood Parkway  
Coeur d'Alene, ID 83814  
208-769-1422

A copy of the annual report shall also be mailed to:

Richard Huddleston, P.E.  
Wastewater Program Manager  
1410 N. Hilton  
Boise, ID 83706  
208-373-0561

4. Notice of completion of any work described in Section E. Compliance Schedule for Required Activities shall be submitted to the Department within 30 days of activity completion. The status of all other work described in Section E shall be submitted with the Annual Report.
5. All laboratory reports containing the sample results for monitoring required by Section G. Monitoring Requirements of this permit shall be submitted with the Annual Report.

LA-000217-01 Draft	Silverwood Inc.	April 14, 2008	Page 17
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## **I. Standard Permit Conditions: Procedures and Reporting**

1. The permittee shall at all times properly maintain and operate all structures, systems, and equipment for treatment, operational controls and monitoring, which are installed or used by the permittee to comply with all conditions of the permit or the Wastewater Reuse Permit Regulations, in conformance with a DEQ approved, current Plan of Operations (Operations and Maintenance Manual) which describes in detail the operation, maintenance, and management of the wastewater treatment system. This Plan of Operations shall be updated as necessary to reflect current operations.
2. Wastewater(s) or recharge waters applied to the land surface must be restricted to the premises of the application site. Wastewater discharges to surface water that require a permit under the Clean Water Act must be authorized by the U.S. Environmental Protection Agency.
3. Wastewater must not create a public health hazard or nuisance condition as stated in IDAPA 58.01.16.600.03. In order to prevent public health hazards and nuisance conditions the permittee shall:
  - a. Apply wastewater as evenly as practicable to the treatment area;
  - b. Prevent organic solids (contained in the wastewater) from accumulating on the ground surface to the point where the solids putrefy or support vectors or insects; and
  - c. Prevent wastewater from ponding in the fields to the point where the ponded wastewater putrefies or supports vectors or insects.
4. The permittee shall:
  - a. Manage the wastewater reuse treatment site as an agronomic operation where vegetative cover is grown and harvested or grazed to utilize the nutrients and minerals in the wastewater, and,
  - b. Not hydraulically overload any particular areas of the wastewater reuse treatment site.
5. All waste solids, including dredgings and sludges, shall be utilized or disposed in a manner which will prevent their entry, or the entry of contaminated drainage or leachate therefrom, into the waters of the state such that health hazards and nuisance conditions are not created; and to prevent impacts on designated beneficial uses of the ground water and surface water. The permittee's management of waste solids shall be governed by the terms of the DEQ approved Waste Solids Management Plan, which upon approval shall be an enforceable portion of this permit.
6. If the permittee intends to continue operation of the permitted facility after the expiration of an existing permit, the permittee shall apply for a new permit at least six months prior to the expiration date of the existing permit in accordance with the Wastewater Reuse Permit Regulations and include seepage tests on all lagoons per latest DEQ procedures.
7. The permittee shall allow the Director of the Idaho Department of Environmental Quality or the Director's designee (hereinafter referred to as Director), consistent with Title 39, Chapter 1, Idaho Code, to:
  - a. Enter the permitted facility,
  - b. Inspect any records that must be kept under the conditions of the permit.
  - c. Inspect any facility, equipment, practice, or operation permitted or required by the permit.
  - d. Sample or monitor for the purpose of assuring permit compliance, any substance or any parameter at the facility.
8. The permittee shall report to the Director under the circumstances and in the manner specified in this section:
  - a. In writing thirty (30) days before any planned physical alteration or addition to the permitted facility or activity if that alteration or addition would result in any significant change in information that was submitted during the permit application process.
  - b. In writing thirty (30) days before any anticipated change which would result in non-compliance with any permit condition or these regulations.
  - c. Orally within twenty-four (24) hours from the time the permittee became aware of any non-compliance which may endanger the public health or the environment at telephone numbers provided in the permit by the Director (see below)

DEQ Regional Office: see Permit Certification Page  
Emergency 24 Hour Number 1-800-632-8000

<b>LA-000217-01</b>	<b>Silverwood Inc.</b>	<b>March 31, 2008</b>	<b>Page 18</b>
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- d. In writing as soon as possible but within five (5) days of the date the permittee knows or should know of any non-compliance unless extended by the DEQ. This report shall contain:
  - i. A description of the non-compliance and its cause;
  - ii. The period of non-compliance including to the extent possible, times and dates and, if the non-compliance has not been corrected, the anticipated time it is expected to continue; and
  - iii. Steps taken or planned to reduce or eliminate reoccurrence of the non-compliance.
- e. In writing as soon as possible after the permittee becomes aware of relevant facts not submitted or incorrect information submitted, in a permit application or any report to the Director. Those facts or the correct information shall be included as a part of this report.
- 9. The permittee shall take all necessary actions to prevent or eliminate any adverse impact on the public health or the environment resulting from permit noncompliance.
- 10. The permittee shall determine (on an on-going basis) if any noxious weed problems relate to the permitted sites. If problems are present, coordinate with the Idaho Department of Agriculture or the local County authority regarding their requirements for noxious weed control. Also address these control operations in an update to the Operations and Maintenance Manual.

<b>LA-000217-01</b>	<b>Silverwood Inc.</b>	<b>March 31, 2008</b>	<b>Page 19</b>
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## J. Standard Permit Conditions: Modifications, Violations, and Revocations

1. The permittee shall furnish to the Director within reasonable time, any information including copies of records, which may be requested by the Director to determine whether cause exists for modifying, revoking, re-issuing, or terminating the permit, or to determine compliance with the permit or these regulations.
2. Both minor and major modifications may be made to this permit as stated in IDAPA 58.01.17.700.01 and 02 with respect to any conditions stated in this permit upon review and approval of the DEQ.
3. Whenever a facility expansion, production increase or process modification is anticipated which will result in a change in the character of pollutants to be discharged or which will result in a new or increased discharge that will exceed the conditions of this permit, or if it is determined by the DEQ that the terms or conditions of the permit must be modified in order to adequately protect the public health or environment, a request for either major or minor modifications must be submitted together with the reports as described in I. *Standard Reporting Requirements*, and plans and specifications for the proposed changes. No such facility expansion, production increase or process modification shall be made until plans have been reviewed and approved by the DEQ and a new permit or permit modification has been issued.
4. Permits shall be transferable to a new owner or operator provided that the permittee notifies the Director by requesting a minor modification of the permit before the date of transfer.
5. Any person violating any provision of the Waste Water Reuse Permit Regulations, or any permit or order issued thereunder shall be liable for a civil penalty not to exceed ten thousand dollars (\$10,000) or one thousand dollars (\$1,000) for each day of a continuing violation, whichever is greater. In addition, pursuant to Title 39, Chapter 1, Idaho Code, any willful or negligent violation may constitute a misdemeanor.
6. The Director may revoke a permit if the permittee violates any permit condition or the Wastewater Reuse Permit Regulations.
7. Except in cases of emergency, the Director shall issue a written notice of intent to revoke to the permittee prior to final revocation. Revocation shall become final within thirty-five (35) days of receipt of the notice by the permittee, unless within that time the permittee request an administrative hearing in writing to the Board of the Department of Environmental Quality pursuant to the Rules of Administrative Procedures contained in IDAPA 58.01.23.
8. If, pursuant to Idaho Code § 67-5247, the Director finds the public health, safety or welfare requires emergency action, the Director shall incorporate findings in support of such action in a written notice of emergency revocation issued to the permittee. Emergency revocation shall be effective upon receipt by the permittee. Thereafter, if requested by the permittee in writing, a revocation hearing before the Board of the Department of Environmental Quality shall be provided. Such hearings shall be conducted in accordance with the Rules of Administrative Procedures contained in IDAPA 58.01.23.
9. The provisions of this permit are severable and if a provision or its application is declared invalid or unenforceable for any reason, that declaration will not affect the validity or enforceability of the remaining provisions.
10. The permittee shall notify the DEQ at least six (6) months prior to permanently removing any permitted reuse facility from service, including any treatment, storage, or other facilities or equipment associated with the reuse site. Prior to commencing closure activities, the permittee shall: a) participate in a pre-site closure meeting with the DEQ; b) develop a site closure plan that identifies specific closure, site characterization, or cleanup tasks with scheduled task completion dates in accordance with agreements made at the pre-site closure meeting; and c) submit the completed site closure plan to the DEQ for review and approval within forty-five (45) days of the pre-site closure meeting. The permittee must complete the DEQ approved site closure plan.

LA-000217-01	Silverwood Inc.	March 31, 2008	Page 20
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## Appendix 1

### Environmental Monitoring Serial Numbers

Computerized Data Reporting Serial Number Key

HYDRAULIC MANAGEMENT UNITS		
Description	Acres	Serial No.
Primary Area	10	MU-0217-01
Boulder Beach	8	MU-0217-02

WASTEWATER SAMPLING POINTS	
Description	Serial No.
Wastewater following filtration, Filter Building (Point of turbidity compliance)	WW-0217-01
Wastewater following 30 minutes of chlorine contact – Reuse Pumping Station (Point of disinfection/total coliform compliance)	WW-0217-02

WASTEWATER STORAGE FACILITIES		
Description	Location	Serial No.
Lagoon Cell #1 (60,000 ft. <sup>3</sup> )	Wastewater Treatment Plant (WWTP)	LG-0217-01
Lagoon Cell #2 (7,500 ft. <sup>3</sup> )	WWTP	LG-0217-02
Lagoon Cell #3 (7,500 ft. <sup>3</sup> )	WWTP	LG-0217-03
Lagoon Cell #4 (15,000 ft. <sup>3</sup> )	WWTP	LG-0217-04
Boulder Beach Irrigation Storage	Silverwood Theme Park	LG-0217-05

## Appendix 2 –Site Maps

### Silverwood Treatment and Reuse Facility



**Figure 2**  
**Aerial View of Site**

LA-000217-01	Silverwood, Inc.	March 31, 2008	Page 22
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## Map of Primary Irrigation Area and Boulder Beach Irrigation Area.

